

# Force Notes

$$F = ma$$

$F$  = force (in Newtons)

$m$  = mass (in kg)

$a$  = acceleration (in  $\text{m/s}^2$ )

Relationships:

## Practice Problems:

1. If you apply a 15 N force to a 12 kg object, what is the acceleration of that object?
2. If a 72 kg object is pushed and has an acceleration of  $3.5 \text{ m/s}^2$ , what is the force of the push?
3. If you apply a 32 N force to an object and it accelerates  $5.3 \text{ m/s}^2$ , what is the mass of the object?

4. If you apply a 12 N force to a 7 kg object, what is the acceleration of that object?

5. If you apply a force of 25 N to an object and it accelerates  $2.1 \text{ m/s}^2$ , what is the mass of that object?

6. If you push a 33 kg object and it accelerates  $7.5 \text{ m/s}^2$ , what is the force of the push.